

10/780,379

STN - STRUCTURE SEARCH
7-27-04

=> d ibib abs hitstr 1-3

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:291951 CAPLUS

DOCUMENT NUMBER: 140:321358

TITLE: Preparation of imidazo[4,5-c]quinoline dimers as
immune response modifiers

INVENTOR(S): Griesgraber, George W.

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: PCT Int. Appl., 71 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004028539	A2	20040408	WO 2003-US30372	20030925
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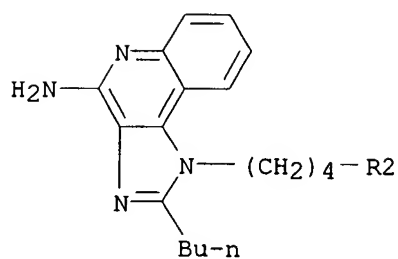
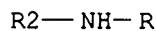
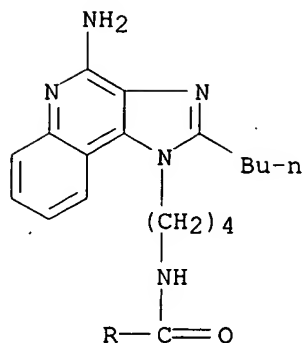
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GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG

US 2004132766	A1	20040708	US 2003-670957	20030925
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PRIORITY APPLN. INFO.: US 2002-413848P P 20020926

OTHER SOURCE(S): MARPAT 140:321358

GI



Inventors

ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:429098 CAPLUS
 DOCUMENT NUMBER: 139:6873
 TITLE: Preparation of imidazoquinolinamines as immune response modifiers.
 INVENTOR(S): Crooks, Stephen L.; Griesgraber, George W.; Lindstrom, Kyle J.; Merrill, Bryon A.; Rice, Michael J.
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
 SOURCE: U.S., 66 pp., Cont.-in-part of U.S. 6,541,485.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6573273	B1	20030603	US 2001-28255	20011221
US 6541485	B1	20030401	US 2000-589236	20000607
TR 200103576	T2	20020621	TR 2001-200103576	20000608
EP 1438958	A1	20040721	EP 2004-4588	20000608
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, CY				
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ZA 2001009857	A	20030228	ZA 2001-9857	20011129

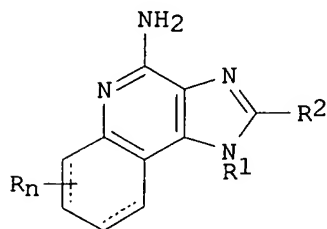
10/780,379

ZA 2001009861	A	20030228	ZA 2001-9861	20011129
US 2004029877	A1	20040212	US 2001-27272	20011221
US 2004014754	A1	20040122	US 2003-352604	20030128
US 2004019048	A1	20040129	US 2003-370800	20030220

PRIORITY APPLN. INFO.:

US 1999-138365P	P	19990610
US 2000-589236	A2	20000607
US 2000-589216	A1	20000607
EP 2000-938205	A3	20000608
US 2001-166321	A1	20010615
US 2001-28255	A1	20011221

OTHER SOURCE(S): MARPAT 139:6873
GI



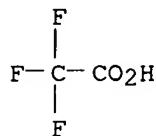
AB Title compds. [I; R1 = ANR3CYNR5XR4; A = alkylene, alkenylene; Y = O, S; X = bond, CO, SO2; R3 = H, alkyl; R4 = (substituted) aryl, heteroaryl, alkyl, etc.; R5 = H, alkyl; R4R5 = atoms to form 3-7 membered (un)substituted heterocyclic ring; R2 = H, alkyl, aryl, etc.; R = alkyl, alkoxy, halo, CF3; n = 0-4], were prepared Thus, reaction of 4-morpholinecarbonyl chloride with 1-(4-aminobutyl)-1H-imidazo[4,5-c]quinolin-4-amine in pyridine afforded N4-[4-[4-amino-1H-imidazo[4,5-c]quinolin-1-yl]butyl]-4-morpholinecarboxamide which induced interferon- α biosynthesis in human cells at a lowest concentration of 3.33 μ M.

IT 313383-37-8P 313383-38-9P 313383-39-0P
313383-40-3P 313383-42-5P 313383-44-7P
313383-46-9P 313383-58-3P 313383-60-7P
313383-61-8P 313383-62-9P 313383-68-5P
313383-69-6P 313383-70-9P 313383-72-1P
313383-89-0P 313383-90-3P 313383-91-4P
313383-92-5P 313383-94-7P 313383-96-9P
313384-02-0P 313384-05-3P 313384-06-4P
313384-12-2P 313384-30-4P 313384-31-5P
313384-32-6P 313384-34-8P 313384-48-4P
313384-50-8P 313384-73-5P 313384-74-6P
313385-10-3P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of imidazoquinolinamines as immune response modifiers)

RN 313383-37-8 CAPLUS

CN Urea, N-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethyl]-N'-(phenylmethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

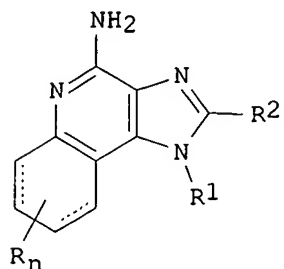
Inventor
 L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2000:900461 CAPLUS
 DOCUMENT NUMBER: 134:56666
 TITLE: Preparation of urea substituted imidazoquinolines as immune response modifiers
 INVENTOR(S): Crooks, Stephen L.; Merrill, Bryon A.; Rice, Michael J.
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
 SOURCE: PCT Int. Appl., 106 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000076518	A1	20001221	WO 2000-US15656	20000608
W:				
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RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6541485	B1	20030401	US 2000-589236	20000607
EP 1198232	A1	20020424	EP 2000-938205	20000608
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TR 200103576	T2	20020621	TR 2001-200103576	20000608
JP 2003501473	T2	20030114	JP 2001-502851	20000608
EE 200100668	A	20030217	EE 2001-668	20000608
AU 766565	B2	20031016	AU 2000-53281	20000608
NZ 515968	A	20031031	NZ 2000-515968	20000608
EP 1438958	A1	20040721	EP 2004-4588	20000608
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NO 2001005504	A	20020207	NO 2001-5504	20011109
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ZA 2001009857	A	20030228	ZA 2001-9857	20011129
ZA 2001009861	A	20030228	ZA 2001-9861	20011129
HR 2001000889	A1	20030831	HR 2001-889	20011129
US 2004029877	A1	20040212	US 2001-27272	20011221
US 2004014754	A1	20040122	US 2003-352604	20030128
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			US 2000-589236	A 20000607
			US 2000-589216	A1 20000607

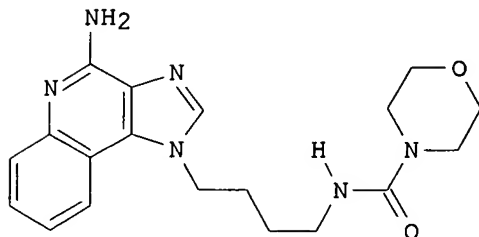
EP 2000-938205 A3 20000608
 WO 2000-US15656 W 20000608
 US 2001-166321 A1 20010615

OTHER SOURCE(S):
 GI

MARPAT 134:56666



I



II

AB The title compds. [I; R1 = alkylNR3CYNR5XR4, alkenylNR3CYNR5XR4 (wherein Y = O, S; X = a bond, CO, SO2; R3 = H, alkyl; R4 = (un)substituted aryl, heteroaryl, alkyl, etc.; R5 = H, alkyl; R4 and R5 can combine to form 3-7 membered (un)substituted heterocyclic ring); R2 = H, alkyl, aryl, etc.; R = alkyl, alkoxy, halo, CF3; n = 0-4], useful as immune response modifiers, were prepared. Thus, reacting 4-morpholinecarbonyl chloride with 1-(4-aminobutyl)-1H-imidazo[4,5-c]quinolin-4-amine in pyridine afforded II which induced interferon α biosynthesis in human cells at 3.33 μ M. The compds. I can induce the biosynthesis of various cytokines such as interferon α and TNF α (data given), and are useful in the treatment of a variety of conditions including viral diseases and neoplastic diseases.

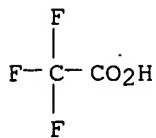
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 313384-32-6P 313384-34-8P 313384-48-4P
 313384-50-8P 313384-73-5P 313384-74-6P
 313385-10-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of urea substituted imidazoquinolines as immune response modifiers)

RN 313383-37-8 CAPLUS

CN Urea, N-[2-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)ethyl]-N'-(phenylmethyl)- (9CI) (CA INDEX NAME)

10/780,379



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

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L1 STRUCTURE UPLOADED

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L3 51 S L1 FULL

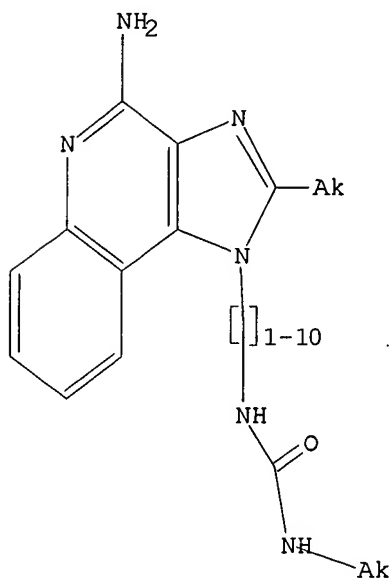
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L4 3 S L3

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 O,N

G2 O,S

G3 Cb,Ak

Structure attributes must be viewed using STN Express query preparation.

=>



Day : Tuesday
Date: 7/27/2004
Time: 08:21:14

Inventor Name Search Result

Your Search was:

Last Name = CROOKS

First Name = STEPHEN

Application#	Patent#	Status	Date Filed	Title	Inventor Name 45
60483200	Not Issued	020	06/27/2003	SULFONAMIDE AND SULFAMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
60138365	Not Issued	159	06/10/1999	AMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
10826836	Not Issued	020	04/16/2004	SULFONAMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
10824232	Not Issued	020	04/14/2004	IMIDAZONAPHTHYRIDINES	CROOKS, STEPHEN L.
10780379	Not Issued	030	02/17/2004	UREA SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
10734306	Not Issued	041	12/12/2003	SULFONAMIDE AND SULFAMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
10731826	Not Issued	093	12/09/2003	PROCESS FOR PREPARING 1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO[4,5-C]QUINOLIN-4-AMINES	CROOKS, STEPHEN L.
10696478	Not Issued	041	10/29/2003	SULFONAMIDO ETHER SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
10696476	Not Issued	020	10/29/2003	SULFONAMIDO ETHER SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
10681814	Not Issued	041	10/07/2003	UREA SUBSTITUTED IMIDAZOQUINOLINE ETHERS	CROOKS, STEPHEN L.
10681711	Not	041	10/07/2003	AMIDO ETHER SUBSTITUTED	CROOKS,

	Issued			IMIDAZOQUINOLINES	STEPHEN L.
<u>10681457</u>	Not Issued	030	10/07/2003	AMIDO ETHER SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10680989</u>	Not Issued	041	10/07/2003	UREA SUBSTITUTED IMIDAZOQUINOLINE ETHERS	CROOKS, STEPHEN L.
<u>10436905</u>	6686472	150	05/13/2003	PROCESS FOR PREPARING 1-SUBSTITUTED, 2-SUBSTITUTED 1-H-IMIDAZO(4,5-C)QUINOLIN-4-AMINES	CROOKS, STEPHEN L.
<u>10406181</u>	Not Issued	094	04/03/2003	IMIDAZONAPHTHYRIDINES	CROOKS, STEPHEN L.
<u>10370800</u>	Not Issued	094	02/20/2003	UREA SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10352604</u>	Not Issued	094	01/28/2003	UREA SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10166321</u>	Not Issued	094	06/15/2001	SULFONAMIDE AND SULFAMIDE SUBSTITUTED IMIDAZOQUINOLINES AND METHODS FOR THE TREATMENT OF PERIODONTAL DISEASE USING THESE AND OTHER IMMUNE RESPONSE MODIFIERS	CROOKS, STEPHEN L.
<u>10165449</u>	6664265	150	06/07/2002	AMIDO ETHER SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10165443</u>	6677347	150	06/07/2002	SULFONAMIDO ETHER SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10164816</u>	6660735	150	06/07/2002	UREA SUBSTITUTED IMIDAZOQUINOLINE ETHERS	CROOKS, STEPHEN L.
<u>10028255</u>	6573273	150	12/21/2001	UREA SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10027273</u>	Not Issued	162	12/21/2001	SULFONAMIDE AND SULFAMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10027272</u>	Not Issued	094	12/21/2001	SULFONAMIDE AND SULFAMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.

<u>10027218</u>	<u>6756382</u>	150	12/21/2001	AMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10013060</u>	<u>6656938</u>	150	12/06/2001	UREA SUBSTITUTED IMIDAZOQUINOLINE ETHERS	CROOKS, STEPHEN L.
<u>10012599</u>	<u>6683088</u>	150	12/06/2001	SULFONAMIDO ETHER SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>10011670</u>	<u>6660747</u>	150	12/06/2001	AMIDO ETHER SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>09974038</u>	<u>6465654</u>	150	10/09/2001	PROCESS FOR PREPARING 1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO [4, 5-C] QUINOLINE-4-AMINES	CROOKS, STEPHEN L.
<u>09706990</u>	<u>6514985</u>	150	11/06/2000	IMIDAZONAPHTHYRIDINES	CROOKS, STEPHEN L.
<u>09589580</u>	<u>6451810</u>	150	06/07/2000	AMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>09589236</u>	<u>6541485</u>	150	06/07/2000	UREA SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>09589216</u>	<u>6331539</u>	150	06/07/2000	SULFONAMIDE AND SULFAMIDE SUBSTITUTED IMIDAZOQUINOLINES	CROOKS, STEPHEN L.
<u>09386486</u>	<u>6348462</u>	150	08/27/1999	1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO[4,5-C] QUINOLIN-4-AMINES	CROOKS STEPHEN L.
<u>09210114</u>	<u>6194425</u>	150	12/11/1998	IMIDAZONAPHTHYRIDINES	CROOKS STEPHEN L.
<u>09060010</u>	<u>5977366</u>	150	04/14/1998	1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO[4,5-C] QUINOLIN-4-AMINES	CROOKS STEPHEN L.
<u>08789264</u>	<u>5741909</u>	150	01/28/1997	1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO[4,5-C]QUINOLIN-4-AMINES	CROOKS STEPHEN L.
<u>08455643</u>	<u>5612377</u>	150	05/31/1995	METHOD OF INHIBITING LEUKOTRIENE BIOSYNTHESIS	CROOKS STEPHEN L.
<u>08353802</u>	<u>5605899</u>	150	12/12/1994	1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO[4,5-C]QUINOLIN-4-AMINES	CROOKS STEPHEN

					L.
<u>08286017</u>	Not Issued	161	08/04/1994	METHOD OF INHIBITING LEUKOTRIENE BIOSYNTHESIS	CROOKS STEPHEN L.
<u>07938295</u>	<u>5389640</u>	150	08/28/1992	1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO[4,5-C]QUINOLIN-4-AMINES	CROOKS STEPHEN L.
<u>07838475</u>	Not Issued	168	02/19/1992	1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO[4,5-C]QUINOLIN-4-AMINES	CROOKS STEPHEN L.
<u>07687326</u>	Not Issued	168	04/18/1991	1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO(4,5-C)QUINOLIN-4-AMINES	CROOKS STEPHEN L.
<u>07662926</u>	Not Issued	168	03/01/1991	1-SUBSTITUTED, 2-SUBSTITUTED 1H-IMIDAZO(4,5-C)QUINILIN-4-AMINES	CROOKS STEPHEN L.
<u>06144970</u>	<u>4327256</u>	150	04/29/1980	TELEPHONE SYSTEM	CROOKS STEPHEN J.

Inventor Search Completed: No Records to Display.

	Last Name	First Name
Search Another:	<input type="text" value="Crooks"/>	<input type="text" value="Stephen"/>
Inventor	<input type="button" value="Search"/>	

To go back use Back button on your browser toolbar.

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